

# North Lily Mining Company

PLST

August 19, 1997

State of Utah Attn: Compliance and Monitoring Program Division of Water Quality 288 North 1460 West P.O. Box 144870

Salt Lake City, Utah 84114-4780

RE: Water quality sample of fluids being land applied

Dear Compliance and Monitoring Personnel:

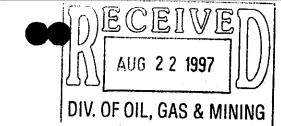
In compliance with Ground Water Discharge Permit No. 230001; Land Application Approval issued to North Lily Mining Company in May 22, 1997, please find enclosed:

Spillway sample taken July 15, 1997

A spillway sample was delivered to Chemtec/Ford, a Utah certified laboratory, on July 15, 1997 for analysis with a request that the water be analyzed per the specification required by the Division of Water Quality.

The following table outlines the progress to date on some of the metals and cyanide (all analysis are reported in mg/l):

PARAMETER	*GROUND WATER OUALITY		DETECTED IN							
	STANDARD	SEP 95	DEC 95	MAR 96	JUN 96	SEP 96	DEC 96	MAR 97	JUN 97	JUL97
Fluoride as F	2.4	5.2	5.7	3.5	5.9	1.6	5.4	3.4	3.1	4.2
Arsenic as As	0.05	0.814	0.500	1.3	0.63	0.44	0.31	0.40	0.06	< 0.05
Barium as Ba	2.0	0.02	< 0.20	< 0.05	0.02	0.02	<0.2	0.02	0.03	0.03
Cadmium as Cd	0.005	< 0.01	< 0.05	< 0.025	< 0.02	0.008	<0.1	< 0.01	< 0.01	< 0.01
Chromium as Cr	0.1	< 0.01	< 0.05	< 0.025	0.041	0.040	<0.1	< 0.005	<0.04	< 0.03
Copper as Cu	1.3	255	188	162	161	102	80.2	69.6	55.0	54.5
Lead as Pb	0.015	0.100	0.100	< 0.04	0.14	0.11	1.3	0.13	0.10	0.08
*Mercury as Hg	0.002	0.232	0.329	0.39	0.40	0.27	0.31	0.35	0.051	0.250
Selenium as Se	0.05	0.17	0.024	0.03	< 0.02	0.02	0.05	0.08	0.02	< 0.02
Silver as Ag	0.05	4.24	3.43	0.56	1.32	7.74	<0.1	1.240	77.0	80.0
Zinc As Zn	5.0	0.19	0.20	0.08	0.30	0.35	<0.2	0.17	0.03	0.06
Cyanide as CN-T	0.75	300	*NOTE	163	149	91	62	61	19.6	43.2
Cyanide as CN-Wad	0.20	291	169	153	156	93	64	63	19.2	42.4
рĤ	6.5 to 8.5	9.31	8.95	9.39	9.20	8.6	8.7	9.00	9.10	8.40



#### Page 2 Water quality sample of fluids being land applied

As the above table indicates, the effluent coming from off the heap leach pads showed significant reductions in several metals and total and wad cyanide levels for the last quarters.

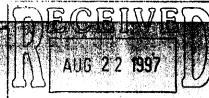
On May 22, 1997 DWQ approved North Lily's March 5, 1997 application for it's Fluid Disposal Plan. As of August 15, 1997 approximately 840,000 gallons of heap leach runoff water has been disposed of on land adjacent to the heap leach pads. The barren pond is empty and the preg pond is nearly empty. The flow coming off the pad at this time is estimated at 4 gallons per minute.

Thank you for your consideration and if you have questions, comments or concerning please contact Paul Spor at (801) 634-1584.

Sincerely,

Paul C. Spor General Manager

cc: Roger A. Foisy, Division of Water Quality
Tom Munson, Division of Oil, Gas, and Mining
Tom Gast, Environmental Management Services



DIV. OF OIL, GAS & MINING

To: North Lily Mining Company attn. Paul Spor

P.O. Box 421 Eureka, UT 84628

Group #: 16868

Lab #: 97-U007806 Project: SILVER CITY

Sample Desc: Composite/Disposal

7/2 - 7/13

Date Sampled: 7/15/97 Date Submitted: 7/15/97 Date: 8/13/97

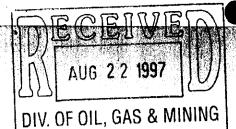
Time Sampled: 8:30 Time Received: 10:30

**CERTIFICATE OF ANALYSIS** 

			DATE		
PARAMETER	RESULT	MDL	ANALYZED	METHOD	analyst
INORGANIC PARAMETERS					
Bicarbonate as HCO3, mg/L	432	1.	7/24/97 10:00	SM 2320B	TM
Carbonate as CO3, mg/L	< 1	1	7/24/97 10:00		TM
Alkalinity, Solids, mg/L	213	1	7/24/97 10:00	SM 2320B	TM
Hydroxide as OH, mg/L	< 1	1	7/24/97 10:00	SM 2320B	TM
Alkalinity, Total (CaCO3), mg/L	355	1	7/24/97 10:00	SM 2320B	TM
Carbon Dioxide, mg/L	313	1	7/24/97 10:00	SM 4500 D	TM
Chloride (D), mg/L	2,390	10	7/23/97 9:00	EPA 325.3	TM
Conductance, Specific, umhos/cm	24,700	0.1	7/18/97 12:00	EPA 120.1	KRF
Cyanide, Free, mg/L	0.270	0.002	8/ 6/97 16:00	ASTM D2036	TPH
Cyanide (T), mg/L	43.2	0.8	7/29/97 17:00	ASTM D2036	TPH
Cyanide, WAD, mg/L	42.4	0.8	7/29/97 17:00	ASTM D2036	TPH
Fluoride, mg/L	4.2	0.5	7/23/97 11:00	EPA 340.2	TPH
Hardness, EDTA Titration, mg/L	1,010	83	7/18/97 10:4!	EPA 130.2	TM
Hardness Index: Very Hard Water				•	
Mercury (T), as Hg, mg/L	0.250	0.004	7/22/97 9:00	EPA 245.1	EG
Nitrite, Nitrogen, mg/L	7	1.25	7/15/97 14:20	EPA 354.1	AJP
Nitrate/Nitrite-Nitrogen, mg/L	< 8	8	7/18/97 14:40	EPA 353.1	LH
pH, units	8.40	0.05	7/15/97 11:1!	EPA 150.1	LS
Phosphorus, Ortho, mg/L	0.17	0.05	7/15/97 14:20	SM 4500E	AJP

Approved By:







Date: 8/13/97

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attn. Paul Spor P.O. Box 421 Eureka, UT 84628

Group #: 16868 Lab #: 97-U007806 **Project: SILVER CITY** 

Sample Desc: Composite/Disposal 7/2 - 7/13

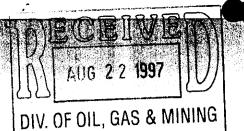
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PARAMETER	RESULT	MDL	ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Sulfate, mg/L	9,590	2500	7/17/97 9:3	0 EPA 375.4	TM
Total Dissolved Solids, mg/L	21,500	250	7/24/97	EPA 160.1	LS
Total Suspended Solids, mg/L	8.4	0.5	7/15/97 11:1	.5 EPA 160.2	LS
Turbidity, NTU	3.96	0.05	7/15/97 11:3	.5 EPA 180.1	LS
Barium (T), as Ba, mg/L	0.03	0.01	7/17/97 12:2	22 EPA 200.7	LH
Beryllium (T), as Be, mg/L	< 0.001	0.001	7/17/97 12:2	22 EPA 200.7	LH
Calcium (T), as Ca, mg/L	347	0.1	7/17/97 12:2	22 EPA 200.7	LH
Chromium(T), as Cr, mg/L	< 0.03	0.03	7/17/97 12:2	22 EPA 200.7	LH
Copper (T), as Cu, mg/L	54.5	0.01	7/17/97 12:2	22 EPA 200.7	$\mathbf{L}\mathbf{H}$
Iron (T), as Fe, mg/L	0.12	0.03	7/17/97 12:2	22 EPA 200.7	LH
Magnesium (T), as Mg, mg/L	8.7	0.1	7/17/97 12:2	22 EPA 200.7	LH
Manganese (T), as Mn, mg/L	0.11	0.01	7/17/97 12:2	22 EPA 200.7	LH
Nickel (T), as Ni, mg/L	0.33	0.01	7/17/97 12:2	22 EPA 200.7	LH
Potassium (T), as K, mg/L	338	2	7/17/97 12:2	22 EPA 200.7	LH
Sodium (T), as Na, mg/L	6,240	2	7/17/97 12:2	22 EPA 200.7	LH
Zinc (T), as Zn, mg/L	0.06	0.01	7/17/97 12:2	22 EPA 200.7	LH
Antimony (T), as Sb, mg/L	< 0.02	0.02	7/22/97 7:4	5 EPA 200.9	EG
Arsenic (T), as As, mg/L	< 0.05	0.05	7/18/97 11:1	.4 EPA 200.9	EG
Cadmium (T), as Cd, mg/L	< 0.01	0.01	7/21/97 7:1	.7 EPA 200.9	EG

Approved By:





Date: 8/13/97

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			DATE			
PARAMETER	RESULT	MDL	ANALYZED		METHOD	ANALYST
INORGANIC PARAMETERS						
Lead (T), as Pb, mg/L	0.08	0.05	7/24/97	8:04	EPA 200.9	EG
Selenium (T), as Se, mg/L	< 0.02	0.02	7/16/97 1	12:23	EPA 200.9	EG
Silver (T), as Ag, ug/L	80	5	7/17/97	7:34	EPA 200.9	EG
Thallium (T), as Tl, mg/L	0.03	0.01	7/16/97	7:46	EPA 200.9	EG
Cation, meq/L	298.1					
Anion, meq/L	274.5					
% Difference,	-4.12					
Receiving Temperature, C	25.5		7/15/97	10:30		RCG

NOTE: Sample submitted not on ice.

Due to background interference the arsenic reporting limit is the best available.

Approved By:

6100 SOUTH STRATLER SALT LAKE CITY UTAH 84107 6905 801 262 7299 PHONE 801 262 7378 FAX

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•	777 700 55 1001	
	DIV. OF OIL, GAS & MINING	



## Sample Chain of Custody

### CHEMTECH - FORD

6100 SOUTH STRATLER SLC, UT 84107 801 262-7299 PHONE 801 262-7378 FAX 1250 LAMOILLE HWY. ELKO, NV 89801 702 738-0111 PHONE 702 753-7255 FAX

Client:	North	Lily	Mining	Co.
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• Er	nvironme	ntal • V	Vaste W	ater • Hazardo	ous Waste • D		Petroleum Co	ntamination	
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